

REMARKS

Claims 1–33 were pending and were rejected. No claims are amended. Reconsideration and withdrawal of the rejections are requested in view of the following remarks.

Claims 1–33 were rejected as obvious over U.S. Patent 7,114,174 to Brooks et al. in view of U.S. Pre-Grant Publication 20050041740 to Sekiguchi et al. It is respectfully submitted that this rejection is improper as neither Brooks nor Sekiguchi, whether separately or in combination teach each limitation of the pending claims as set forth below.

Claims 1–21

Independent method claim 1 recites, among other things, “increasing video quality as a function of a fraction of macroblocks that are skipped to take advantage of decoder processing capability that would otherwise be unused as a result of the skipped macroblocks.” Applicants’ specification teaches various examples of “increasing video quality” such as increasing frame rate and picture size. Other ways to increase the video quality are also contemplated, such as a finer degree of quantization, etc. Each of these examples is given to aid the Examiner’s understanding of the context of the invention, and are not intended to limit the claim language quoted above.

On page 2 of the Office Action, Examiner contends that this limitation is met by Brooks in Fig. 6A; col. 3, ll. 8–14. However, the cited passages do not teach or suggest “increasing video quality as a function of a fraction of macroblocks that are skipped...” In fact, the cited passages are entirely silent as to macroblock skipping, much less increasing video quality as a function of a fraction of macroblocks that are skipped. Moreover, in his very next sentence Examiner concedes that “Brooks does not specifically disclose encoding macroblocks ... wherein some macroblocks are skipped and determining a target video quality ... as a function of a fraction of macroblocks that are skipped.” If Brooks does not disclose determining video quality as a function of macroblocks that are skipped, then it cannot meet the referenced limitation of claim 1, which clearly requires “increasing video quality as a function of a fraction of macroblocks that are skipped...”

Examiner goes on to propose Sekiguchi as teaching the missing limitation “increasing video quality as a function of a fraction of macroblocks that are skipped...” Examiner cites Fig. 2, element ST0 and Fig. 7, coding mode estimator 8 as teaching this limitation. Specifically,

Examiner states that Sekiguchi teaches that “the coding mode is determined by analyzing a cost function if the frame is a mix of skipped blocks and non-skipped blocks.” However, the coding mode of Sekiguchi is not a measure of video quality, but rather a selection of a technique for most efficiently representing the data that is to be encoded. As with Brooks, Sekiguchi contains no teaching or suggestion of “increasing video quality as a function of a fraction of macroblocks that are skipped....”

Because Brooks and Sekiguchi both lack any teaching or suggestion of “increasing video quality as a function of a fraction of macroblocks that are skipped....,” the rejection of claim 1 as obvious over the combination of Brooks and Sekiguchi is improper. Moreover, the rejections of claims 2–14, which depend from claim 1, are also improper for at least this reason.

Independent claim 15 is drawn to a video conferencing terminal that comprises, among other things “a communication interface adapted to ... increase video quality as a function of a fraction of macroblocks that are skipped....” Therefore, the rejections of independent claim 15 and claims 16–21 depending therefrom as obvious over Brooks and Sekiguchi are improper for at least the reasons set forth above.

Claims 22–31

Independent claim 22 is drawn to a method of quality-improvement of a digitally-encoded video sequence comprising, among other things, “increasing video quality as a function of an encoder model of decoder processing load to take advantage of decoder processing capability that would otherwise be unused.” In rejecting this claim, Examiner states “arguments analogous to those presented in claim 1 are applicable to claim 22, and, therefore, claim 22 has been analyzed and rejected with respect to claim 1 above.” As set forth above, the rejection of claim 1 is improper, and, using the Examiner’s reasoning, the rejection of claim 22 is equally improper.

Second, it is respectfully submitted that claim 22 is different in scope from claim 1. Claim 1 recites “increasing video quality as a function of a fraction of macroblocks that are skipped....” Conversely, claim 22 recites “increasing video quality as a function of an encoder model of decoder processing load....” These are not the same thing. Claim 22 requires that the encoder determine video quality according to an encoder model of the decoder processing load. Neither Brooks nor Sekiguchi teaches an encoder that determines encoded video quality

according to a model of decoder processing load. Therefore, the rejection of claim 22 as obvious over Brooks in view of Sekiguchi is improper for at least this reason. Moreover, the rejections of claims 23–26, which depend from claim 22, are also improper for at least this reason.

Independent claim 27 is drawn to a video encoder comprising, among other things, “one or more image processing engines adapted to ... increase video quality as a function of an encoder model of decoder processing load...” Therefore, the rejections of independent claim 27 and claims 16–21 depending therefrom as obvious over Brooks and Sekiguchi are improper for at least the reasons set forth above.

Conclusion

Reconsideration and withdrawal of the rejections of all pending claims are requested in view of the foregoing remarks. Additionally, as the claims are allowable over the cited art, a Notice of Allowance for all pending claims is requested.

Respectfully submitted,

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Date

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